

IV. REMARKS

Status of the Claims

Claims 1-11 are canceled and claims 12-19 are added to more particularly define the invention. Claims 12-19 are submitted for further consideration.

Summary of the Office Action

The now canceled Claims 1-5 and 7-11 were rejected under 35USC102(b) on the basis of the cited reference Hieda, U.S. Patent No. 5,307,159. Canceled Claim 6 was rejected under 35USC103(a) on the basis of the cited reference Hieda, in view of the teaching of Juenger, U.S. Patent No. 5,778,106. The Examiner is respectfully requested to reconsider his rejection in view of the newly submitted claims and the following remarks.

The arrangement of the invention, as described in newly submitted claims 12-19, leads to significant technical advantages. The claimed structure of colour pixels, combined with the luminance pixels, create colour different components (U and V), which necessitate minimum calculations in order to determine YUV equivalent components. Advantageously, this arrangement maps to MPEG and JPEG colour formats in a convenient manner that makes MPEG/JPEG easy to compute. More specifically, the pixel structure facilitates calculating the components needed for MPEG and JPEG directly from YUV 4:2:0. Further, the present invention allows calculation of the Y components from only a minor correction of the luminance output from U and V components in a simple calculation. No complex interpolation needs to be carried out, and the grey value for the U and V components is accurate, being half a pixel from actual values (the lens performance being defined by the pitch between grey pixels). This is described,

for example at page 5, line 25 and also at page 4, lines 13 to 17 of the present specification:


"because the gray resolution and color resolution of an image sensor of the present invention is designed to match those of MPEG and JPEG".

Through the subject invention, a greater sensitivity of the sensor is provided.

In view of the remarks stated above, Applicant submits that all of the claims under consideration contain patentable subject matter and favorable action by the Examiner is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,


Geza C. Ziegler, Jr.
Reg. No. 44,004

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Date

Perman & Green, LLP
425 Post Road
Fairfield, CT 06824
(203) 259-1800
Customer No.: 2512